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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,721	08/08/2006	Hideki Ando	129026	1978
25944 7590 06/01/2010 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER YANCHUK, STEPHEN J				
ART UNIT		PAPER NUMBER		
1795				
NOTIFICATION DATE		DELIVERY MODE		
06/01/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction25944@oliff.com
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Office Action Summary

Application No.

10/588,721

Applicant(s)

ANDO ET AL.

Examiner

STEPHEN YANCHUK

Art Unit

1795

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-7 rejected under 35 U.S.C. 103(a) as obvious over Ono et al [PGPUB 20020055046].

Claim 1-2, 5, and 7: Ono teaches an electrochemical battery in which deterioration of the charge transport performance is minimized [Abstract]. The separator is taught to be made of combination of polyethylene or polypropylene that have various porous diameters and are laminated [Paragraph 202]. The separators are made to be non-woven [Paragraph 270]. The limitation to the size of the separator is not patentable because it is known in the art to have the separator be in relation to the electrodes (same size or larger). *MPEP 2144.04 IV.A*. The applicant revealed that it is known in the art to vary the area density between 60-85 and specific surface area between .6-.9 [JP 201-313066]. The thickness is obvious to alter between .1-.3mm for heat and thermal management issues [JP 2001-319682, Paragraph 8-10, 14, claim 4].

Claim 3: The amount of electrolyte is to be optimized to match the volume of the container and what is required to provide sufficient ion conductivity. *MPEP 2144.04 IV.A*

Claim 6: Ono teaches having two or more types of materials in the separator [Paragraph 202]. The claim however does not limit the claim since it is all inclusive. The two limitations are greater than 30% and less than 50% wherein 0-100% is contained.

3. Claims 1-4, 6 are rejected under 35 U.S.C. 103(a) as being obvious under Takeuchi [PGPUB 2002/0025476].

Claim 1-2: Takeuchi teaches a separator made of polypropylene membrane and mesh [Paragraph 21]. The mesh is non-woven [Paragraph 24]. The limitation to the size of the separator is not patentable because it is known in the art to have the separator be in relation to the electrodes (same size or larger). *MPEP 2144.04 IV.A*. The applicant revealed that it is known in the art to vary the area density between 60-85 and specific surface area between .6-.9 [JP 201-313066]. The thickness is obvious to alter between .1-.3mm for heat and thermal management issues [JP 2001-319682, Paragraph 8-10, 14, claim 4].

Claim 3: The amount of electrolyte is to be optimized to match the volume of the container and what is required to provide sufficient ion conductivity. *MPEP 2144.04 IV.A*

Claim 4: The separator comprises lithium trifluoromethane sulfonate [Claim 5].

Claim 6: Takeuchi teaches having two or more types of materials in the separator [Paragraph 17]. The claim however does not limit the claim since it is all

inclusive. The two limitations are greater than 30% and less than 50% wherein 0-100% is contained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN YANCHUK whose telephone number is (571)270-7343. The examiner can normally be reached on Monday through Thursday 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/STEPHEN YANCHUK/

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Examiner, Art Unit 1795

/PATRICK RYAN/

Supervisory Patent Examiner, Art Unit 1795